



UNDP/WORLD BANK/WHO SPECIAL PROGRAMME FOR
RESEARCH AND TRAINING IN TROPICAL DISEASES (TDR)

FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD (JCB)

WHO headquarters, Geneva, Switzerland
30 June and 1 July 1992

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1. INTRODUCTION

Representatives of 26 governments - elected members of the Joint Coordinating Board (JCB) - and of the three co-sponsoring agencies of the Special Programme for Research and Training in Tropical Diseases (TDR), met as JCB(15) at WHO headquarters, Geneva, on 30 June and 1 July 1992. Representatives of 14 governments and 14 organizations participated in the session as official observers. The JCB members and observers participating in the session and the names of their representatives are listed in Annex 1 [document TDR/JCB(15)/92.2 Rev.1].

The session was opened by Dr M. L. Abdelmoumène, Deputy Director-General of WHO. A summary of his statement to JCB(15) is contained in Annex 2.

The Chairman of JCB(15) was Dr G. A. Williams, Director, Disease Control and International Health, Federal Ministry of Health and Human Services, Ikoyi, Lagos, Nigeria, who had been elected in 1991 as Chairman of the Board for two years, for JCB(14) and JCB(15). JCB(15) elected Dr C. Marchal, Responsible Officer for the Coordination of Medical Research, Under-Directorate of Health and Social Development, Ministry of Cooperation and Development, Paris, France, as Vice-Chairman until its Sixteenth Session in 1993.

The Board adopted the agenda as presented [document TDR/JCB(15)/92.1 Rev.1, attached as Annex 3].

Dr M. L. dos Mares Guia, President of the National Council of Scientific and Technological Development (CNPq), Brasilia, Brazil, gave a keynote address to JCB(15) on the role of the Brazilian National Research Council (CNPq) in the scientific and technological development of Brazil. The Board expressed its gratitude to Dr Mares Guia for his excellent address. A summary of his address is contained in Annex 4. Dr Mares Guia and Dr T. Godal, Director TDR, signed a Memorandum of Understanding concerning a TDR-CNPq partnership for training Brazilian research workers in disciplines related to TDR target diseases prevalent in Brazil. CNPq would fund fellowships in conjunction with research and development and institution strengthening projects funded by TDR in Brazil. A copy of the Memorandum of Understanding is included in Annex 4. The Board welcomed this Memorandum of Understanding and hoped that similar partnerships could be set up between TDR and other research councils, foundations and governments, especially in the advanced developing countries.

JCB(15) approved the Report of the Fourteenth Session of the Joint Coordinating Board [document TDR/JCB(14)/91.3].

2. REPORT OF THE STANDING COMMITTEE

The Board reviewed the issues raised in the report of the Standing Committee [document TDR/JCB(15)/92.4], which were introduced by Mr T. Rothermel, Director, Division for Global and Interregional Programmes, United Nations Development Programme, and by Dr B. Liese, Director, Health Services Department, The World Bank.

JCB(15):

(i) Re-emphasized the importance of closer collaboration between leprosy and tuberculosis research activities, in view of the similarity between the two diseases. Approved the recommendation made by the TDR Scientific and Technical Advisory Committee (STAC) at its fourteenth meeting in March 1992, that TDR's leprosy Steering Committees be reorganized to form two new joint leprosy-tuberculosis Steering Committees in collaboration with WHO programmes concerned with tuberculosis, but requested the Standing Committee and STAC to monitor the arrangement closely and to report back to the JCB if changes seemed desirable.

(ii) Thanked the Standing Committee for its efforts to raise funds for the Programme. Encouraged the Committee to continue to pursue all possible fundraising mechanisms, and to collaborate with other organizations working in similar areas which had a comparative advantage, including UNICEF with respect to applied research, to maximize the use of their ability to raise funds for common objectives.

3. SCIENTIFIC AND TECHNICAL ACTIVITIES

JCB(15) considered TDR's scientific and technical progress and plans. The Board received an overview from Dr Godal, Director TDR, of the major activities during the past year focusing on the research and development area. Dr Godal also referred to the recommendation by STAC-14 that a Prospective Thematic Review (PTR) be carried out on the scientific directions of TDR. STAC had suggested that the PTR review the Programme's scientific directions on the basis of a revised strategy for TDR to be prepared by Director TDR. Issues for consideration in designing a revised strategy for TDR were presented to the Board in document TDR/JCB(15)/92.11. A summary of Dr Godal's presentation is contained in Annex 5.

JCB(15) examined the Report of the Fourteenth Meeting of the Scientific and Technical Advisory Committee, introduced by Professor B. R. Bloom, Chairman STAC (document TDR/STAC-14/92.3). Professor Bloom also referred to the reports of the two Prospective Thematic Reviews carried out over the past year on directions and organization of TDR's research and development related to anti-parasite vaccines (document TDR/PTR-Vaccines/92.3) and on directions and organization of TDR's research capability strengthening activities (document TDR/PTR-RGS/91.3). A summary of Professor Bloom's statement is included in Annex 5.

In addition, Dr Williams, Chairman JCB(15), gave a short report on his attendance at STAC-14. A summary of Dr Williams' report is included in Annex 5.

As requested by JCB(14) in 1991, the Board received a report on the progress and plans of the Product Development Unit, together with information on the Programme's multidisease chemotherapy activities [document TDR/JCB(15)/92.5]. The report also contained information on the Programme's overall collaboration with industry and on policy regarding ethical matters.

Dr P. de Raadt, Director, WHO Division of Control of Tropical Diseases (CTD) referred to the relationship between CTD and TDR. He welcomed TDR's operational research activities which he considered as the final stage of product development. CTD was working closely with TDR to ensure that a revised strategy for TDR would include appropriate mechanisms for interaction between the two programmes and strengthen collaboration.

JCB(15) made the following comments:

3.1 Prospective Thematic Review on Directions and Organization of TDR's Research and Development related to Anti-Parasite Vaccines

3.1.1 Expressed its appreciation of the report on the Prospective Thematic Review on directions and organization of TDR's research and development related to anti-parasite vaccines and noted STAC's recommendations resulting from this review.

3.1.2 Requested that STAC examine further vaccine development priorities, taking into consideration not just the most likely vaccine candidates, but also the work of other agencies in this area, the comparative advantages of TDR, and problems in the field.

3.1.3 Requested that these priorities be developed in collaboration with the UNDP-WHO Programme for Vaccine Development and that details be included in the Proposed Programme Budget for the 1994-1995 Biennium.

3.1.4 Asked for mechanisms to be put into place for the regular review of vaccine development priorities.

3.2 Prospective Thematic Review on Directions and Organization of TDR's Research Capability Strengthening Activities

3.2.1 Expressed its appreciation of the report on the Prospective Thematic Review on directions and organization of TDR's research capability strengthening activities.

3.2.2 Reaffirmed the agreement by JCB(14) that the next phase of research capability strengthening activities should incorporate a differentiated approach, with special attention to the health needs of the least developed countries, and greater focus on individuals and on training relative to institution strengthening activities.

3.2.3 Emphasized the importance of South-South linkages and of improved communications within these networks and with their partners in the North.

3.2.4 Stressed the need for setting priorities for future research capability strengthening activities and for introducing better criteria for evaluation. Such criteria for the future should vary according to the stage of development of the country and should include the impact on disease control activities, national relevance, essential national health research criteria, and examination of the input of institutions not only from the South but also regarding the partnership role played by the institutions from the North.

3.2.5 Agreed that the report on the Prospective Thematic Review be published and distributed widely, and include a preface by Chairman JCB reflecting the Board's views.

3.3 Prospective Thematic Review on the Scientific Directions of TDR

3.3.1 Approved the recommendation by STAC-14 that a Prospective Thematic Review be carried out on TDR's scientific directions.

3.3.2 Agreed that the Prospective Thematic Review should examine the balance between basic research, product development and operational research, identify priorities and TDR's comparative advantages, explore changes in the functions and composition of STAC with a view to yielding a stronger representation of the social and economic disciplines, and lead to a more integrated approach.

3.3.3 The proposed new strategy for TDR should be designed to facilitate improved collaboration with control programmes at WHO and in the developing endemic countries.

3.3.4 Agreed that representatives of certain JCB members, selected by Director TDR on the basis of the expertise required, and bearing in mind an appropriate North/South balance, should be included in the small group which would carry out the Prospective Thematic Review to strengthen the policy aspects of the review. Representatives of the

TDR Standing Committee members should also participate. Representatives should serve in their personal capacities.

The terms of reference of the Prospective Thematic Review were expanded to reflect the Board's views. The revised terms of reference and the list of participants are contained in Annex 6.

3.4 Product Development Unit

3.4.1 Noted the report on the activities of the Product Development Unit and collaboration with industry.

3.4.2 Requested regular reports on product development and collaboration with industry. Looked forward to receiving at JCB(16) in 1993 reports on the Unit's activities which would be prepared in response to the request by STAC-14 and included in a chapter in the Eleventh Programme Report.

3.5 General Issues

3.5.1 Requested regular information on the priorities set by the Programme, starting with the Eleventh Programme Report and the Proposed Programme Budget for the 1994-1995 Biennium which should contain clear descriptions, in non-technical terms, of the recommended priorities and the rationale used.

3.5.2 Reiterated the importance of and the need to expand the Programme's catalytic role in stimulating others to become involved in and to fund tropical disease research activities.

3.5.3 Re-emphasized the need for closer collaboration between TDR and other programmes working in related fields to strengthen complementarity and ensure the best use of limited resources, taking fully into account the Programme's comparative advantages.

3.5.4 Requested that higher priority be given to research on gender issues and the dissemination of the results of such research.

3.5.5 Expressed its appreciation of the presentations by Director TDR and the Chairman of the Scientific and Technical Advisory Committee, and thanked the JCB Chairman for his report on his attendance at STAC-14.

4. TECHNICAL PRESENTATION ON TDR-SUPPORTED PRODUCTS: THEIR IMPACT ON DISEASE CONTROL - CASE STUDIES ON CHAGAS DISEASE AND LEPROSY

The technical presentations at JCB(15) focused on the impact on disease control of products developed with TDR support. Case studies on Chagas disease and leprosy were presented. Summaries of the presentations as listed below are contained in Annex 7.

<u>Presentation</u>	<u>Presenter</u>
Introduction on Chagas disease, its importance, distribution and clinical manifestations, and on research activities relevant to control	Dr A. Moncayo, Chief, WHO Trypanosomiasis and Leishmaniasis Control Unit and Secretary of the TDR Steering Committee on Chagas Disease
Chagas disease control activities in Argentina and in the Southern Cone countries	Dr E. L. Segura, Minister of Health and Social Action of the Province of Catamarca, Argentina
Introduction on leprosy, its importance, distribution and clinical manifestations, and on progress with the implementation of multidrug therapy for leprosy	Dr S. K. Noordeen, Chief, WHO Leprosy Unit and Secretary of the TDR Steering Committee on the Chemotherapy of Leprosy

Presentation

Presenter

Experience in the use of multidrug therapy for leprosy (MDT) in Myanmar, especially with regard to the delivery of MDT through a primary health care system

Dr U Tin Myint, Former Deputy Director, Leprosy Control Programme, Department of Health, Yangon, Myanmar

JCB(15):

- (i) Welcomed the success of the use of the tools for control of Chagas disease and leprosy.
- (ii) Noted the importance of social and economic research to ensure the acceptability of the products by the populations involved.
- (iii) Expressed its appreciation of the presentations on Chagas disease and leprosy.

5. FINANCIAL MATTERS

5.1 Opinion of the External Auditor of WHO and the Status of Funds Statement for the TDR Trust Fund as at 31 December 1991, and Financial Report for the 1990-1991 Biennium

Following their introduction by Dr K. Behbehani, Acting Responsible Officer for Programme Management, TDR, the Board reviewed and accepted the Opinion of the External Auditor of the World Health Organization and the Status of Funds Statement for the Trust Fund for the Special Programme for Research and Training in Tropical Diseases as at 31 December 1991 [document TDR/JCB(15)/92.6] and the Financial Report for the 1990-1991 Biennium [document TDR/JCB(15)/92.7].

Details on the Programme's financial status in 1990-1991 are contained in Annex 8.

5.2 Financial Status in the 1992-1993 Biennium and Adjustments in the Programme Budget for the Biennium

The Board received details of Programme's estimated financial situation in the 1992-1993 biennium, information on the revised budget for the biennium and on a working budget for 1992, contained in document TDR/JCB(15)/92.8. Based on the secretariat's assessment of contributions expected during the current biennium, there would be a gap of US\$ 7.1 million in the funds required to meet the level of the approved budget of US\$ 76.8 million for 1992-1993 and allowing for a minimum carry-over of US\$ 1 million into 1994-1995. Information on the estimated financial status in the 1992-1993 biennium, showing the funding gap, is included in Annex 8.

The Second TDR External Review Committee (ERC) in its report to the JCB in 1988 had recommended that over the next five years TDR would require a funding increase of at least 25-30% in real terms. This meant that for a budget of US\$ 29.6 million in 1988, the funding level should reach in real terms around US\$ 38 million in 1993. This had not materialized. Estimated obligations (expenditures) for 1993 would fall back to the 1988 level and the 1993 estimated contributions in constant dollars would drop 16% (US\$ 4.9 million) compared to 1988 contributions. Figures 1 and 2 in Annex 8 show the comparison of ERC projections with obligations and contributions from 1988 to 1993, all calculated in real terms, and total contributions to TDR during the period 1988-1993 in current and constant dollars.

Adjustments had been made in certain research and development components of the 1992-1993 budget. For operational reasons, the Integrated Chemotherapy Development Component (against African trypanosomiases, Chagas disease and leishmaniases) had been separated from the Product Development Component and this required a transfer of chemotherapy projects and their funding from the Components for African Trypanosomiases, Chagas Disease

and Leishmaniasis. Transfers from research and development general activities (operational support) had also been made to the Integrated Chemotherapy Development Component and to the Product Development Component to meet the costs of these two fully operating components. In addition, resources from the Director's Initiative Fund had been transferred to the Social and Economic Research Component to meet increasing needs.

In view of the financial constraints, TDR was currently operating on the basis of a working budget for 1992 which was US\$ 2.6 million (6.9%) less than the approved budget level for 1992. The budget would be further adjusted in line with contributions received and in accordance with the procedures for budget revision approved by the JCB. Efforts were being made to make further savings in operational support activities and in personnel services. If no new or additional contributions were received in the current biennium, the level of the 1992-1993 budget [based on exchange rates at the time of JCB(15)] would be around US\$ 69.7 million. This would represent a decrease of US\$ 2.1 million compared to obligations in the 1990-1991 biennium and US\$ 7.1 million compared to the budget approved by the JCB last year for 1992-1993.

The reductions in the working budget had several implications. The urgent implementation of top priority activities had virtually eliminated the possibility of supporting new projects in some components. In addition, the number of research and development proposals received by TDR was increasing but the proportion of the proposals funded was decreasing.

JCB(15):

(i) Noted with concern the estimated financial status for the 1992-1993 biennium. Sixteen JCB participants indicated continued financial support for the Programme.

(ii) Requested that future budgets and financial reports provide information on the breakdown of the Product Development Component activities to show the allocation of resources and include information on resources allocated to the least developed countries.

6. SELECTION OF ONE MEMBER OF THE JCB ACCORDING TO PARAGRAPH 2.2.3 OF THE TDR
MEMORANDUM OF UNDERSTANDING

JCB(15) followed the selection procedures established during its previous sessions and adhered to the 60-day deadline for the receipt of applications for JCB membership under paragraph 2.2.3 of the Memorandum of Understanding. The Board selected the Government of Viet Nam for JCB membership for a period of three years from 1 January 1993.

The list of members of the Joint Coordinating Board as of 1 January 1993 is attached as Annex 9.

7. MEMBERSHIP OF THE SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE

In view of the forthcoming Prospective Thematic Review on TDR's scientific directions which would inter alia examine the functions and composition of the Scientific and Technical Advisory Committee (STAC), the Board agreed that the new members proposed [listed in document TDR/JCB(15)/92.10] would have a term of office of three years and the proposed extensions of existing members would be for one year only. JCB(15) endorsed the membership of the Scientific and Technical Advisory Committee as of 1 January 1993. The list of members with their terms of office is attached as Annex 10.

JCB(15) also:

(i) Stressed that in the future TDR should ensure a more multidisciplinary group and a better balance to take into account the needs of the developing endemic countries.

(ii) Agreed that, from 1994 onwards, members with industrial experience be included in STAC to review and advise on product development issues.

Dr Godal encouraged the JCB participants to provide the Executing Agency with the names and curricula vitae of potential STAC members.

8. DATE AND PLACE OF THE SIXTEENTH SESSION OF THE JCB

JCB(15) decided that the Sixteenth Session of the Joint Coordinating Board would take place on Tuesday and Wednesday 29 and 30 June 1993 at WHO headquarters, Geneva, Switzerland.

9. CLOSURE OF THE SESSION

Dr Williams, Chairman JCB, considered that JCB(15) had been a very successful session. The participation by JCB members and observers had been active and lively and the discussions had been open, helpful and constructive. The Board had agreed that the Programme continued to be forward-looking, it was well managed technically and financially, despite the current financial constraints, and Dr Williams hoped that the Director and his staff would continue with their excellent work. Dr Williams referred to the high quality of the documents which had contributed to the success of the session. He thanked the interpreters for facilitating communication among the participants and for agreeing to extend their period of work on occasion to accommodate the needs of the session. Finally, Dr Williams thanked the JCB participants and secretariat for their support and cooperation.

The JCB participants expressed their gratitude to Dr Williams for his excellent chairmanship of the Board over the past two years.

FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

WHO headquarters, Geneva, 30 June and 1 July 1992

TDR/JCB(15)/92.2 Rev.1

Executive Board Room

LIST OF PARTICIPANTS

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Dr Dennis CARROLL, Science Adviser, Office of Health, Bureau for Research and Development, Agency for International Development, Washington, D.C.

Mr Harold P. THOMPSON, International Health Attaché, United States Mission to the United Nations Office and other International Organizations at Geneva

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Mr Graham C. MILLER, Audit Manager, External Audit

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Chairman, TDR Scientific and Technical Advisory Committee (STAC)

Professor Barry R. BLOOM, Chairman, Department of Microbiology and Immunology, Albert Einstein College of Medicine of Yeshiva University, New York, N.Y., USA

Technical Presenters

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Dr U TIN MYINT, Former Deputy Director, Leprosy Control Programme, Department of Health, Yangon, Myanmar

Dr Alvaro MONCAYO, Chief, WHO Trypanosomiases and Leishmaniases Control Unit and Secretary of the TDR Steering Committee on Chagas Disease

Dr S. K. NOORDEEN, Chief, WHO Leprosy Unit and Secretary of the TDR Steering Committee on the Chemotherapy of Leprosy

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FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

Geneva, 30 June and 1 July 1992

SUMMARY OF THE OPENING STATEMENT TO JCB(15)
BY DR M. L. ABDELMOUMENE, DEPUTY DIRECTOR-GENERAL OF WHO

Dr Abdelmoumène referred to the changing world. It was changing in its environment, politics, economics, social relations and even its values. WHO and its programmes also had to change and recognize that many health problems in fact arose out of changing sociopolitical and ecological conditions.

The tropical diseases in the Special Programme's care - malaria, schistosomiasis, lymphatic filariasis, onchocerciasis, African trypanosomiasis, Chagas disease, leishmaniasis and leprosy - were particularly susceptible to variation and change. Malaria, schistosomiasis and sleeping sickness stood out among these in their connection with moving populations, development projects and social disruption. Leishmaniasis also bore some of these features. Leishmaniasis, lymphatic filariasis, onchocerciasis and leprosy were also stigmatizing, disfiguring diseases, which put the heaviest burden on the most deprived populations, often women. All these diseases could wreak great economic, as well as personal and social havoc. It was estimated that one in ten people in the world - 500 million people - suffered from one, or more, of these tropical diseases.

Dr Abdelmoumène emphasized that these diseases had to be controlled, and new and better tools were needed for that control. Malaria control programmes, in particular, faced great difficulties worldwide, because of non-immune populations moving into malarious areas, parasites which continuously developed resistance to existing drugs and many other factors. WHO estimated that malaria killed approximately 800 000 children a year - nearly one child every 30 seconds - most of them in Africa. To put an end to this toll, simple diagnostic procedures and effective early therapy were essential, together with personal protection against disease vectors. The Programme was making important immediate contributions to the development of appropriate tools - such as new drugs and insecticide-impregnated bednets - and was not neglecting the long term, as in its research on malaria vaccines.

Schistosomiasis was the second most prevalent of the Programme's target diseases. Some 200 million people were infected - about one in every 30 people in the world. It continued to rob people of the hope created by many water development projects, dams and irrigation systems. For this disease the main problems on which work was progressing were cost-effective community diagnosis, cost-effective delivery of an excellent drug - praziquantel - and vaccines for the prevention of re-infection.

Lymphatic filariasis, the third of the Programme's target diseases, infected some 90 million people and caused elephantiasis, hydrocele and other appalling afflictions. For this disease work was being carried out on, among other things, the better use of an old drug - diethylcarbamazine (DEC) - and a new one - ivermectin - and on the biological control of vectors. Onchocerciasis, usually known as river blindness, affected 17 million people. The Programme had shown that ivermectin halted the deterioration of sight.

For sleeping sickness, always an epidemic threat in sub-Saharan Africa, tsetse-fly traps had been developed for epidemic control, as well as a new drug - eflornithine - which had become known as the "resurrection drug", so effective did it appear to be. Chagas disease, suffered by 18 million people in Latin America, might be eliminated as a public health problem with community vector-control interventions developed with the Programme's help.

Leishmaniasis, a sadly neglected disease, affected 12 million people. Visceral leishmaniasis was currently epidemic in one large African country. There was no good drug

treatment for it. Leprosy was coming under control with multidrug therapy, which was constantly being improved.

In these matters the Special Programme collaborated with the WHO programmes for the control of tropical diseases. Relevant and good research, both fundamental and operational, of course had to be the close partner of good control. As indicated, for some diseases the means of control needed to be improved. For others, more research was needed if control was to be maintained in the face of evolving drug resistance in parasites, insecticide resistance in vectors, and changing socioeconomic and environmental conditions.

Dr Abdelmoumène referred to the Programme's budget. A mere 5% of global funds for health research were spent on the health problems of the South. Despite the scale of the problems it was concerned with, the Special Programme worked with a tiny fraction of that 5%. Moreover, funding for development in the South was becoming increasingly difficult to obtain in the present lengthy recession. WHO had also been affected by this difficult financial climate. If tropical diseases were to be mastered, new leads pursued, research turned into action, the Special Programme needed solid financial support.

Finally, Dr Abdelmoumène commented on the tasks facing the Joint Coordinating Board and wished the participants well in their deliberations on this most important programme.

FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

WHO headquarters, Geneva, 30 June and 1 July 1992
Executive Board Room

TDR/JCB(15)/92.1 Rev.1

AGENDA

Reference Documents

1. Opening of the Session
2. Election of Vice-Chairman
3. Adoption of Agenda
TDR/JCB(15)/92.1 Rev.1
TDR/JCB(15)/92.1a
4. Keynote Address by Dr M. L. Mares Guia, President of the National Council of Scientific and Technological Development (CNPq), Brasilia, Brazil
Title: "The role of the Brazilian National Research Council (CNPq) in the scientific and technological development of Brazil"
5. Matters Relating to the Report of the Fourteenth Session of the Joint Coordinating Board (JCB) TDR/JCB(14)/91.3
6. Report of the Standing Committee: To Include TDR/JCB(15)/92.4
 - Collaboration Between Leprosy and Tuberculosis Research Activities
 - Communications Activities
 - Fundraising Activities
 - Observer Status at JCB Sessions
7. Scientific and Technical Progress
 - 7.1 Director's Report, Summarizing Progress and Plans, Including Activities of the Product Development Unit and Multidisease Chemotherapy TDR/JCB(15)/92.5
 - 7.2 Report by Chairman, Scientific and Technical Advisory Committee: To Include Prospective Thematic Reviews on Directions and Organization of TDR's:
 - Research Capability Strengthening Activities; and TDR/PTR-RCS/91.3
 - Research and Development Related to Anti-Parasite Vaccines TDR/PTR-Vaccines/92.3
 - 7.3 Prospective Thematic Review on the Scientific Directions of TDR TDR/JCB(15)/92.11
8. Technical Presentation on TDR-Supported Products: Their Impact on Disease Control - Case Studies on Chagas Disease and Leprosy

Reference Documents

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| 9. Financial Matters | |
| 9.1 Opinion of the External Auditor of WHO and the Status of Funds Statement for the TDR Trust Fund as at 31 December 1991 | TDR/JCB(15)/92.6 |
| 9.2 Financial Report for the 1990-1991 Biennium | TDR/JCB(15)/92.7 |
| 9.3 Financial Status in the 1992-1993 Biennium and Adjustments in the Programme Budget for the Biennium | TDR/JCB(15)/92.8 |
| 10. Selection of One Member of the JCB According to Paragraph 2.2.3 of the TDR Memorandum of Understanding | TDR/JCB(15)/92.9
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Annex 8
Memorandum of Understanding -
TDR/CP/78.5/Rev.88 |
| 11. Membership of the Scientific and Technical Advisory Committee | TDR/JCB(15)/92.10 |
| 12. Date and Place of the Sixteenth Session of the JCB | TDR/JCB(15)/92.4 |
| 13. Other Business | |
| 14. Closure of the Session | |

FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

Geneva, 30 June and 1 July 1992

SUMMARY OF THE KEYNOTE ADDRESS TO JCB(15) BY
DR M. L. DOS MARES GUIA, PRESIDENT OF THE NATIONAL COUNCIL
OF SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT (CNPq), BRASILIA, BRAZIL
ON THE ROLE OF THE BRAZILIAN NATIONAL RESEARCH COUNCIL (CNPq)
IN THE SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT OF BRAZIL,
AND MEMORANDUM OF UNDERSTANDING BETWEEN CNPq AND TDR

Dr Mares Guia referred to the establishment of CNPq in 1951 and to its main objective to foster scientific and technological development. Priority was given to programmes and research projects aimed at the development of the basic sciences and technologies that might be applied to the solution of national goals as well as provide better living conditions to the population. To implement these activities, CNPq offered a variety of scholarships (in Brazil and abroad), fellowships and research grants in all areas of knowledge to train human resources. CNPq also offered other services to support scientific and technological development, e.g. assistance with the acquisition of equipment required for research, processing of foreign donations and support for visiting scientists.

CNPq scholarships and grants were awarded through a peer review system. There were currently about 160 scientists taking part in 31 review committees. Each committee had a coordinator who took part in a coordinators' committee which met periodically to plan future activities.

During the past few years, in spite of economic difficulties, the number of scholarships awarded had increased. During the period 1985-1992, scholarships in Brazil had risen from 11 985 to 34 542 and scholarships abroad had increased from 936 in 1985 to 2802 in 1992. Despite this impressive growth, the number was insufficient to meet increasing needs in Brazil. In addition to the quantitative growth there had been important qualitative adjustments to the system.

Another important function of CNPq was to promote and support technological development through short- and medium-term action in research and development by institutions, enterprises and universities. CNPq strove to establish a stable and permanent system for technological development through strengthening its research and development institutions and providing continuity to its supporting activities.

Ten research units, including national institutes and laboratories, research and study centres and two museums, were responsible for the research activities developed by CNPq itself. The units were working in the fields of physics, pure and applied mathematics, mineral technology, anthropology, zoology, botany, scientific computing, synchrotron light, astronomy, astrophysics and geophysics. With their diverse origins and goals the units were striving for excellence and recognition in their respective fields of knowledge either by carrying out basic or applied research, training human resources, rendering services to the scientific and technological communities or by performing the task of disseminating scientific and technological information. This latter task was an important activity of CNPq. The Brazilian Institute for Scientific and Technological Development was charged with this responsibility, its main tasks being to identify and disseminate scientific and technological information, and to coordinate, manage and access data bases.

CNPq was involved in re-analysing its own structure and performance to strengthen its role in the major governmental goals of improving the quality of industrial products, raising the competitive level of Brazilian companies and improving the living conditions and social status of the Brazilian population.

Dr Mares Guia stressed that international cooperation was an important activity. CNPq had established mechanisms for bilateral cooperation with various countries throughout the world and aimed to complement its research support operations through agreements for international cooperation. One such agreement, given below, would be signed with TDR and would be fundamental for the planning and execution of research and development projects aimed at: (a) creating knowledge on control of the tropical diseases, with emphasis on epidemiology, field work and testing of new drugs against tropical diseases; (b) carrying out studies on the social and economic impacts of these diseases on public health; (c) promoting further exchange of information; and (d) processing and handling information on the tropical diseases.

WORLD HEALTH ORGANIZATION



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In reply please refer to:

Priete de rappeler la référence:


Memorandum of Understanding

1. The Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) and the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR) have mutually agreed to collaborate in promoting and implementing a joint TDR/CNPq programme designated "TDR-CNPq partnership" for training Brazilian research workers in disciplines related to TDR target diseases prevalent in Brazil i.e. malaria, leishmaniasis, Chagas disease, schistosomiasis, filariasis and leprosy.
2. CNPq shall fund fellowships (Undergraduate, graduate, as well as post doctoral), in conjunction with research and development and institution strengthening projects funded by TDR in Brazil.
3. Brazilian scientists applying to TDR for Research and Development or Institution Strengthening projects, shall include in their applications detailed curriculum vitae and research plans of junior scientists, who are considered eligible for a CNPq fellowship.
4. The TDR review bodies (Steering Committees and Research Strengthening Group) while reviewing the proposals from Brazilian scientists, will also examine the credentials of the junior scientists to be trained within the context of the proposed project.
5. Proposals which are approved for funding by TDR, will be forwarded for financing of the fellowship(s) by CNPq. TDR will cover the other items in the applications as recommended for funding by the respective review bodies.
6. CNPq shall then provide funding of the fellowships selected under this scheme directly to the Brazilian researchers and (or) institutions. In the case of fellows studying for a "split"/"sandwich" Ph.D. or postdoctoral fellowship outside Brazil, CNPq shall also be responsible for payment of stipends in foreign currency and for travel costs to and from the place of study.

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7. On signature of this Memorandum of Understanding, CNPq shall notify Brazilian scientists interested in securing funds under this scheme and TDR shall publish details of this Memorandum of Understanding in its Newsletter.
8. The above arrangement will come into effect for grants submitted and approved for funding for the first time after the signature of this Memorandum of Understanding, and will not apply to fellowship and grants currently receiving support from CNPq or TDR.
9. The duration of this Memorandum of Understanding will be three years in the first instance from the date of signature. A formal reporting/monitoring system will be developed by mutual consultation in order to keep track of the progress of fellows funded under this programme.



Dr Marcos Luiz dos Mares Guia
President
Conselho Nacional de Desenvolvimento
Científico e Tecnológico



Tore Godal
Director
Special Programme for Research and
Training in Tropical Diseases (TDR)

Date

1/7-92

Date

1/7-92

FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

Geneva, 30 June and 1 July 1992

SUMMARIES OF PRESENTATIONS MADE UNDER ITEM 7
OF THE AGENDA - SCIENTIFIC AND TECHNICAL PROGRESS -
BY DR T. GODAL, DIRECTOR TDR; PROFESSOR B. R. BLOOM, CHAIRMAN STAC;
AND DR G. A. WILLIAMS, CHAIRMAN JCB(15)

1. SUMMARY OF THE PRESENTATION BY DR T. GODAL, DIRECTOR TDR

Dr Godal presented an overview of the major activities during the past year in the research and development area. He did not refer to product development activities as they were presented to the Board in a report on the Product Development Unit and collaboration with industry [document TDR/JCB(15)/92.5]. The work of the Scientific and Technical Advisory Committee and the two Prospective Thematic Reviews on directions and organization of TDR's research capability strengthening activities and research and development related to anti-parasite vaccines would be presented by Chairman STAC. Dr Godal assured the Board that the secretariat was in full agreement with the recommendations resulting from these two Prospective Thematic Reviews.

The TDR target diseases were well known for their clinical and epidemiological diversity but Dr Godal proposed to cluster them into just two types:

(i) the chronic diseases, which were disabling and stigmatizing diseases, often striking school-aged children: schistosomiasis, filariasis, leprosy, leishmaniasis of the skin and mucous membranes, and Chagas disease; and

(ii) the acute, feverish, life-threatening diseases in all of which the pathogens were evolving drug resistance: malaria, visceral leishmaniasis and African trypanosomiasis.

One of the major constraints in the control of the tropical diseases was that approaches had to be inexpensive because the diseases predominated among poor people in poor countries.

The Chronic Diseases

Among the chronic diseases, recent problems and progress included:

- The need for cheap diagnosis: extended trials in Africa of school questionnaires to detect communities with high prevalence of urinary schistosomiasis had proved the method to be effective, accurate, fast and cost-effective, only 4% of the cost of egg examinations. This method would now be tried out against other TDR target diseases. Since schistosomiasis was a disease which occurred primarily in school children, this awareness of children could be used as an entry point for health education and health intervention.
- The need for cheap drug delivery:
 - Schistosomiasis was a disease against which there was a remarkably effective drug - praziquantel - which cost less than US\$ 1 per treatment and required treatment only about once a year. Delivery cost was something else. TDR was collaborating with the WHO Division of Communicable Diseases to develop protocols for testing the safety of combinations of drugs such as praziquantel and albendazole for the treatment of intestinal helminths, to deal simultaneously with both schistosomiasis and other worm infections, to spread the delivery costs of these treatments. Trials in four countries were expected to start before the end of 1992.

- Up to the end of 1991, six million tablets of ivermectin, provided free for onchocerciasis by Merck & Co., Inc., had been delivered.
- The need for options to meet community needs: patients with the same disease in different communities and control settings might have different concerns and different approaches:
 - Leprosy: if successful, the current trials of ofloxacin to reduce the duration of multidrug therapy to as little as one or two months would offer communities alternative treatment schedules. It was also necessary to identify options preferred not only by programme managers but also by the patients themselves. In addition, TDR was carrying out studies on the social consequences of the disease. One study had clearly shown that students with leprosy were being taken out of schools and segregated from their families. Health education was very important to prevent such action.
 - Onchocerciasis: results of a study in one country had shown that communities were more concerned about severe skin manifestations, which affected the young and those of marriageable age, than they were about blindness. These findings had demonstrated that the priorities of the people might not be the same as those of the medical profession.
- The need for studies on neglected diseases, like lymphatic filariasis: trials of ivermectin compared with the old drug diethylcarbamazine (DEC) against the disease had shown that a single dose of ivermectin killed the filarial larvae with fewer side effects than DEC; and that DEC, normally given in multiple doses, also worked in a single dose. Further studies would now be carried out by TDR to establish whether ivermectin could block transmission of the disease, what was the effect of ivermectin on clinical manifestations and whether it killed the adult worms. Within a few years results of these studies and work on biological control of the mosquito vectors of lymphatic filariasis should lead to a new control strategy for the disease and hopefully to an intensified control effort.
- The need for attention to women who had particular problems with stigmatizing tropical diseases.

The Acute Diseases

Among the acute diseases, recent problems and progress included:

- Drug resistance: a most serious threat to malaria chemotherapy was emerging at the Thai-Cambodian border, where a Plasmodium falciparum strain had been discovered that was resistant to chloroquine, fansidar, quinine, halofantrine and mefloquine.
- Drug development:
 - TDR's main response to drug resistance in malaria was to accelerate the development of artemisinin derivatives. There were two tracks: the Chinese product artemether was in Phase III trials for registration in endemic countries; and TDR's alternative derivative, arteether, had begun Phase I trials in February 1992. Arteether was being developed in close collaboration with a pharmaceutical company. The work on arteether illustrated how products could be developed by public/private sector collaboration and at a low projected price.
 - New drugs were urgently needed against the Trypanosomatidae, especially leishmaniasis and Chagas disease. TDR had responded by integrating drug development for these two diseases and African trypanosomiasis under one component and there were already several promising leads.

- Acute respiratory infections and malaria were two major causes of death in children with fever which were not easy to separate diagnostically at the peripheral level. Drugs were required which could be given quickly to children without the need to make a full clinical diagnosis. TDR was collaborating with the WHO Division of Diarrhoeal and Acute Respiratory Disease Control to find treatments that could be used for both conditions. Cotrimoxazole was already the preferred treatment against acute respiratory infections and was available at low cost and it appeared to be very effective against malaria.

- Protection:

- As reported to JCB(14) last year, a study in one African country on insecticide impregnated bednets had shown that their use could reduce childhood mortality from malaria by more than 60%. Confirmatory studies were starting in four African countries and a fifth was under consideration.
- Much malaria vaccine work was taking place without TDR support. Three vaccine candidates had reached human trials: a circumsporozoite combination peptide repeat, a synthetic peptide repeat and a circumsporozoite protein plus merozoite surface antigen.

- The need for attention to women:

- Malaria might be a very serious problem in pregnant adolescent girls.
- Results of one study had shown that far less women than men attended clinics. Health education could be important to change this situation.

Dr Godal stressed that field research was not easy and expressed his gratitude to the scientists who carried out field trials often under quite difficult circumstances.

Prospective Thematic Review on the Scientific Directions of TDR

In the last part of his presentation, Dr Godal referred to the recommendation made by the TDR Scientific and Technical Advisory Committee at its fourteenth meeting in March 1992 that a Prospective Thematic Review (PTR) be carried out on the scientific directions of TDR. STAC had suggested that the PTR review the Programme's scientific directions on the basis of a revised strategy for TDR to be prepared by Director TDR. In fact the first notion of a strategic review of the Programme had come from a TDR staff retreat held in January 1992. The staff had undertaken a collective self-inquiry to improve the Programme's performance for the benefit of those suffering from the tropical diseases and had felt that TDR needed to become more "community" oriented in its approach. This meant a multidisciplinary approach to assess needs and demands in the field, not only based on the epidemiological situation but also on perceived needs of the communities, cost-effective analyses and health financing analyses of the different approaches.

Dr Godal considered that such a revised strategy would require concentration on TDR's comparative advantages, consolidation of the Programme's activities and closer collaboration with programmes working in related fields. Some examples of collaboration with other WHO programmes had been referred to earlier. In addition, TDR had to establish linkages beyond the health sector, e.g. education, as referred to earlier, and agroforestry to avoid past mistakes such as ignoring the problems of schistosomiasis and malaria in planning water development projects. Consolidation of TDR's field research activities should provide the best opportunities for identifying and initiating such collaborative efforts in the future.

In the area of product development, TDR's comparative advantage in relation to industry was weak but was stronger when compared to the public sector. The Product Development Unit facilitated focused, highly selected and intensive product development activities.

For basic research, the methodological approaches taken were very similar in the different diseases and Dr Godal believed that a consolidation of basic research could be achieved. TDR's comparative advantage in relation to medical research councils was not strong in basic research but the Programme could play an important role in promoting neglected fields such as molecular entomology.

Dr Godal suggested that the time might have come for the Programme to move away from its disease-specific components and to institute a multidisciplinary approach in applied field research, to focus product development on a few high priority areas and to consolidate basic research activities. A clustering of activities to become more selective would make better use of TDR's limited resources.

Dr Godal had only provided an outline of a possible scenario as the strategic review process was still at a relatively early stage of development. However it was important to involve the JCB in the process at an early stage and the secretariat looked forward to receiving the Board's views on the possible revised strategy.

2. SUMMARY OF THE PRESENTATION BY PROFESSOR B. R. BLOOM, CHAIRMAN STAC

Professor Bloom summarized the recommendations resulting from the two Prospective Thematic Reviews (PTR) on directions and organization of TDR's research and development related to anti-parasite vaccines and research capability strengthening activities, and the recommendations by STAC-14.

Recommendations Resulting from the PTR on Directions and Organization of TDR's Research and Development Related to Anti-Parasite Vaccines (document TDR/PTR-Vaccines/92.3)

1. Research should continue on vaccines for all TDR target diseases.
2. Research on vaccines should be consolidated and stratified into two parallel tracks:
 - (i) initiation/acceleration of human trials in three disease areas - malaria, schistosomiasis and leishmaniasis; and
 - (ii) basic research should continue on all the diseases to acquire a better understanding of the mechanisms of protective immunity.
3. Carefully staged human Phase I and II trials should provide the crucial decision points for evaluating the feasibility of proceeding with specific vaccines; and the limits imposed by animal models, particularly primate models, as predictors of human immune responses needed to be recognized.
4. Cost-effectiveness projections alone should not be the decisive factor in supporting TDR vaccine projects.
5. New opportunities provided by genetic manipulation of protozoa should be pursued.
6. As vaccines developed with TDR support would be introduced and used in the Expanded Programme on Immunization (EPI) programmes, EPI timing for immunizations should be included in vaccine trial protocols at the earliest appropriate opportunity.
7. In view of the lack of interest in vaccines against TDR target diseases by the private sector in industrialized countries, WHO/TDR should explore public sector support and developing country private sector support for vaccine production, particularly in Phase I and II studies.

Professor Bloom referred to the two-track approach. Until now TDR had pursued vaccine development for all of its target diseases. However, in view of the Programme's limited resources it was necessary to focus on the areas of greatest need and where there were the greatest opportunities for success to use the resources in the most cost-

effective way. New opportunities might arise and priorities might consequently change but at the moment work would be accelerated on vaccines against three diseases - malaria, schistosomiasis and leishmaniasis.

Malaria. With 270 million people infected and emergence of drug resistance, there was an urgent need to develop vaccines against malaria. Professor Bloom reported on progress. There was a new lead with regard to a sporozoite or pre-erythrocytic vaccine and promising leads for gametocyte vaccines (transmission-blocking vaccines) against both vivax and falciparum malaria. It was likely that pre-erythrocytic and transmission-blocking vaccine candidates would become available within the next few years. This was not necessarily the case for asexual blood-stage vaccines and a successful combined vaccine should ultimately include this component. The development of transmission-blocking vaccines was a major responsibility for TDR as other agencies were less interested in this area - it was a good case for public sector investment. Stage-specific vaccines (sporozoite/pre-erythrocytic, asexual blood-stage and transmission-blocking) would be useful for certain target groups but the full potential of the different vaccines would only be realized when they could be used as a combined vaccine. As industrialized countries were interested in producing a pre-erythrocytic vaccine, TDR focused its resources more on asexual blood-stage and transmission-blocking vaccines as well as on field studies.

Schistosomiasis. Two hundred million people were infected with this disease. Praziquantel was a very good drug but did not prevent rapid reinfection and its efficacy was limited when given to non-immune human populations. Vaccines would represent, in conjunction with chemotherapy, major tools for the control of schistosomiasis. Several cloned molecules were now available which reduced but did not eliminate the worm burden and, at least one of them, which reduced worm fecundity and egg viability, was now considered for Phase I human trials.

Leishmaniasis. Twelve million people suffered from the disease. Treatment with current drugs was inadequate, costly and there were serious side-effects. On-going trials using killed parasites and BCG were encouraging. They were very likely to provide better understanding of Leishmania infections and if successful, would lead to large-scale vaccination.

STAC had recommended that research continue on vaccine development against all the TDR target diseases as there was still a lot to learn about the immunological mechanisms of protection and surrogate endpoints needed to be developed. For Chagas disease, more research was required to determine how much heart damage was caused by the parasite and how much by the immune reaction to the parasite. For African trypanosomiasis, further studies were needed on the role of lymphokines, and for filariasis there was still a lot to learn about protection. In the case of leprosy, it was likely that transmission occurred before people were aware that they had the disease and could be treated, and there was little evidence to suggest that chemotherapy, as successful as it was for treating patients suffering from leprosy, had any effect on transmission.

Professor Bloom described the concerns about vaccine development against the TDR target diseases. There was recognition of the limited usefulness of animal models which meant that as soon as safety was assured, it would be human Phase I and II trials which would provide the answers. Major questions related to who would pay the costs of producing the new recombinant vaccines whose markets would be the developing endemic countries where profitability was unlikely, and who would pay the costs of meeting regulatory standards. Professor Bloom emphasized that there was an important need for discussion on public/private sector collaboration.

Major Conclusions and Recommendations of the PTR on Directions and Organization of TDR's Research Capability Strengthening Activities (document TDR/PTR-RCS/91.3)

Professor Bloom referred to the request by JCB(13) in 1990 for a policy paper on TDR's research capability strengthening (RCS) activities which had led to the PTR being

carried out. STAC had welcomed the task of reviewing these activities after 15 years of TDR investment, totalling US\$ 77.8 million.

The analysis of RCS activities had been based on four sources of data: an internal survey of several hundred TDR trainees (77.4% response rate); an internal survey of the institutions which had received long-term grants (91% response rate); TDR management information system data; and closer analysis of five institutions which had completed long-term institution strengthening grants and which had performed well.

From the inception of the Programme in 1975 until 31 December 1991, TDR had awarded 1435 research strengthening grants. One hundred and seventy-nine of these grants were institution strengthening grants awarded to 134 institutions in 45 countries. The majority were long-term grants. Of the long-term grant recipients, 96% had established collaboration with ministries of health, 83% had established collaboration with other national institutions and 48% had established collaboration with international institutions. With regard to training grants, 1241 had been awarded to 993 individuals from 65 countries. Almost 27% of the trainees were women. Over 200 host institutions in 39 countries had received TDR trainees. One hundred and thirty trainees from 28 countries had received doctoral training and 90% of the Ph.D. candidates had received doctoral degrees.

In 1983, a decision had been taken that Ph.D. trainees should conduct the field work for their theses in their home countries and since that time 71% of these trainees had carried out field research in their home countries. Eighty-seven per cent of trainees were still in the field of training, 90% of the trainees had expressed satisfaction with their training and 90% of trainees had returned to their countries. Of the trainees who had not returned home, one fifth had remained in other disease endemic countries, as special circumstances prevented some of them from returning home.

With regard to expenditures and distribution of funds, US\$ 77.8 million had been spent on RCS activities since the beginning of the Programme - 53% on institution strengthening and 47% on training activities. The African Region had received the largest share of these funds, followed by Latin America and then the other regions. Seven per cent of funds had been spent on the least developed countries and 145 trainees (14%) came from these countries. In the early years of the Programme, a large amount of resources had been invested in long-term grants to institutions but in recent years such resources had been diminishing and more resources were being devoted to training activities through a variety of grants.

Measures of scientific productivity had long been the subject of much debate and, although imperfect, five indicators had been used to measure the outputs of TDR's investment in research capability strengthening:

- scientific publication record prior, during and after the grant period;
- ability to attract additional resources following the grant period;
- ability to compete successfully for TDR R&D grants;
- participation in national and international collaborative activities; and
- human resources development, including staff development and training.

The publication record of almost all of the institutions which had received long-term grants had improved and some of the institutions had been able to raise funds from sources other than TDR. In some parts of the world these resources came from national governments and international sources. However, in other parts of the world there was little financial support from national governments which forced the institutions to depend on external funding. Professor Bloom indicated that this situation presented a dilemma for

STAC which considered that TDR funds should be spent on activities which would be sustainable.

Thirty-one of the 34 institutions which had completed a TDR long-term institution strengthening grant had responded to a structured survey questionnaire, and 27 had provided sufficient data to permit further analysis. Eight institutions were considered to be outstanding in terms of their scientific productivity and recognition by other external funding sources, eight were in the middle, and 11 were not very successful, in fact some were considered as investment failures. In general, most of the institutions in countries with a higher UNDP Human Development Index (HDI) were more successful than those in countries with a lower HDI. However, some institutions in countries with a low HDI had done well in terms of publication record and ability to attract additional resources, and the reverse was also true.

The HDI, economic and political stability were not strong predictors of success in themselves. In all cases what seemed to be the most vital factor was good, strong scientific leadership. Two other important factors were linkages to scientists and/or institutions in the North, and a strong methodological/disciplinary approach rather than a descriptive approach.

Professor Bloom referred to TDR's multi-level concept of research capability strengthening, from the individual level of training and the various grants offered, to the institutional level and then the network level. At the institutional level, TDR was moving away from institution grants to strengthening grants in selected areas, e.g. programme-based grants on interdisciplinary research involving several institutions and the TDR/Rockefeller Foundation collaborative grants which were aimed at building North/South collaborative research networks.

The Programme's RCS activities had evolved considerably. The earlier focus on research needs had moved towards research productivity and quality and there was now a more differentiated approach. The number of grant mechanisms had increased. With regard to training, emphasis had shifted from the masters level to the doctoral level and more training would be carried out in the advanced developing countries rather than in the industrialized countries. Laboratory-based research was moving towards field research, epidemiology and social and economic research and there was greater flexibility in meeting needs. In addition, focus was shifting away from institutions to individuals and networks.

Professor Bloom summarized the proposed future directions for TDR's research capability strengthening which would:

- adopt a differentiated approach to countries, including specific activities for the least developed countries;
- emphasize human resources development;
- develop and strengthen research and training networks;
- promote advanced communications technology; and
- continue to devote special efforts to field research and social and economic research.

Recommendations by STAC-14

Professor Bloom summarized the recommendations made by the Scientific and Technical Advisory Committee at its fourteenth meeting in March 1992. STAC had:

- endorsed the report of the PTR on vaccines;

- endorsed the recommendations of the PTR on research capability strengthening;
- commended TDR for its cooperation with the WHO Division of Diarrhoeal and Acute Respiratory Disease Control and the UNDP-WHO Programme for Vaccine Development;
- expressed concern that the success in translating scientific advances into products for clinical and field studies had not been paralleled by support for these expanded responsibilities;
- expressed appreciation for the extraordinarily dedicated and competent secretariat staff; and
- recommended that over the next year a Prospective Thematic Review be carried out on TDR's scientific directions.

Professor Bloom concluded by saying that STAC was very impressed by the evolution of TDR and its flexibility.

3. SUMMARY OF THE REPORT BY DR G. A. WILLIAMS, CHAIRMAN JCB(15), ON HIS ATTENDANCE AT STAC-14

Dr Williams considered that it had been a highly rewarding and stimulating experience to observe at close quarters the work of STAC. He considered that STAC played an indispensable and vital role in carrying out an independent review of TDR's scientific activities.

Dr Williams summarized STAC's deliberations on the report of Director TDR, the Product Development Unit, the review of scientific workplans, the Prospective Thematic Reviews on research capability strengthening and on anti-parasite vaccines, and on the symposium. At STAC-14, Dr Williams had referred to the Programme's financial shortfall and had urged STAC members and the secretariat to intensify their fundraising efforts.

Dr Williams conveyed to the Board STAC's appreciation for the consideration which the JCB gave to the STAC reports and recommendations.

FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

Geneva, 30 June and 1 July 1992

PROSPECTIVE THEMATIC REVIEW (PTR) ON THE SCIENTIFIC DIRECTIONS OF TDR
REVISED TERMS OF REFERENCE AND LIST OF PARTICIPANTS

Objectives: To review the intermediate- and long-term scientific objectives and strategies of TDR with the aim of accelerating the development of innovative disease-control systems, and leading to a more integrated approach.

In particular, the balance between research, development and operational research components will be reviewed with a view to identifying the strategic choices facing TDR and to consolidating Programme operations in order to accelerate the pace of development, strengthen the impact on disease and lead to a more integrated approach.

Such a strategic approach was already the basis of TDR in 1975, when the Special Programme was formally established. At that time, the proposed strategy consisted of combining the Programme elements in multidisciplinary disease specific research groups. More recently, important strategic moves were made in TDR by establishing the Product Development Unit and by launching the concept of Integrated Chemotherapy.

At present, the need for a renewed strategic review and scientific direction stems from, inter alia, the growing recognition of diversity of TDR customers and their needs, the need to accelerate product development, and the need to respond to the rapidly changing political, economic and social environments in many parts of the world.

The proposed new strategy for TDR should be designed to facilitate improved collaboration with control programmes at WHO and in the developing endemic countries.

It is considered that the PTR should:

- (i) Generate criteria for establishing Programme priorities; such criteria should include:
 - the comparative advantage of TDR vis-à-vis other potential funders and/or implementors in multilateral and bilateral donor agencies and in the commercial, public and non-profit private sectors;
 - scientific and technical feasibility, viability and sustainability;
 - congruence with articulated national priorities regarding TDR's six target diseases;
 - the degree to which such activities complement and enhance other related development activities;
 - cost-effectiveness and affordability;
 - political, social, and cultural acceptability.
- (ii) Apply the criteria developed to current and planned TDR activities in order to delineate a hierarchy of priorities.
- (iii) Propose an organizational structure optimally suited to executing the priority activities.
- (iv) Establish an appropriate balance between basic disease research, product development and field operational research activities.

- (v) With the greatest accuracy possible, determine the cost of the prioritized undertakings.
- (vi) Develop a rationalized approach to re-ordering priorities on the basis of discrepancies between projected cost and received funding.
- (vii) Explore changes in the function and composition of STAC with a view to ensuring a more multidisciplinary group to meet the evolving needs of the Programme.

Date and Place of the PTR Meeting: 17 and 18 September 1992 at WHO headquarters, Geneva.

Participants:

Members of the Scientific and Technical Advisory Committee

Professor G. T. Castillo, Professor of Rural Sociology, Department of Agricultural Education and Rural Studies, College of Agriculture, University of the Philippines at Los Baños, Laguna, Philippines (Chairperson, PTR)

Professor B. R. Bloom, Chairman, Department of Microbiology and Immunology, Albert Einstein College of Medicine of Yeshiva University, New York, N.Y., USA (Chairman, STAC)

Professor D. T. Jamison, Graduate School of Education and Professor, School of Public Health, University of California, Los Angeles, California, USA

Dr C. M. Morel, Head, Department of Biochemistry and Molecular Biology, Oswaldo Cruz Institute, Oswaldo Cruz Foundation, Rio de Janeiro, Brazil

Professor L. A. Salako, Head, Department of Pharmacology and Therapeutics, University of Ibadan, Ibadan, Nigeria

Dr V. P. Sergiev, Director, Martsinovskiy Institute of Medical Parasitology and Tropical Medicine, Moscow, Russian Federation

Representatives of the Joint Coordinating Board

Dr G. A. Williams, Director, Disease Control and International Health, Federal Ministry of Health and Human Services, Ikoyi, Lagos, Nigeria (Chairman, JCB)

Dr C. Marchal, Responsible Officer, Under-Directorate of Health and Social Development, Ministry of Cooperation and Development, Paris, France (Vice-Chairman, JCB) [Represented at the PTR meeting by Dr J. Perigaud, Responsible Officer, Department of Research for Development, Directorate-General for Research and Technology, Ministry of Research and Technology, Paris]

Dr R. E. Bissell, Assistant Administrator, Bureau for Research and Development, Agency for International Development, Washington, D.C., USA [Represented at the PTR meeting by Dr D. Carroll, Science Adviser, Office of Health, Bureau for Research and Development, Agency for International Development, Washington, D.C.]

Mr E. J. N. Brouwers, Head, UN Aid Section, Ministry of Foreign Affairs, The Hague, Netherlands [Represented at the PTR meeting by Dr M. de la Bey, Senior Programme Officer, Directorate-General for International Cooperation, Research Programme, Ministry of Foreign Affairs, The Hague]

Dr A. A. Darwish, Assistant Director, General Administration for Communicable Disease Control, Ministry of Health, Cairo, Egypt

Dr L. Freij, Head, Health and Nutrition Section, Swedish Agency for Research Cooperation with Developing Countries (SAREC), Stockholm, Sweden [Represented at the PTR meeting by Dr B. Carlsson, Research Officer, Health and Nutrition Section, Swedish Agency for Research Cooperation with Developing Countries, Stockholm]

Dr N. K. Kere, Director, Medical Training and Research Institute, Ministry of Health and Medical Services, Honiara, Solomon Islands

Dr D. N. Nabarro, Chief Health and Population Adviser, Health and Population Division, Overseas Development Administration, London, United Kingdom

Representatives of the TDR Standing Committee

UNDP

Mr T. Rothermel, Director, Division for Global and Interregional Programmes, United Nations Development Programme, New York, N.Y., USA

World Bank

Dr B. Liese, Director, Health Services Department, The World Bank, Washington, D.C., USA

WHO

Dr R. H. Henderson, Assistant Director-General/Special Programme Coordinator

Other invited participants

Professor D. J. Bradley, Professor of Tropical Hygiene and Director of Ross Institute of Tropical Hygiene, London School of Hygiene and Tropical Medicine, London, United Kingdom (Member of the Second TDR External Review Committee, 1988, and Member of the TDR Research Strengthening Group)

Dr A. Cerami, The Picower Institute for Medical Research, Manhasset, New York, USA (Former STAC Member)

Professor H. Danielsson, Swedish Medical Research Council, Stockholm, Sweden (Member of the First and Second TDR External Review Committees, 1982 and 1988)

Professor R. W. Davis, Department of Biochemistry, Stanford University School of Medicine, Stanford, California, USA

Professor V. Ramalingaswami, Chairman, Task Force on Health Research for Development, Geneva, Switzerland (Former STAC Member)

Dr E. M. Samba, Director, Onchocerciasis Control Programme in West Africa, Ouagadougou, Burkina Faso

TDR Secretariat

Dr T. Godal, Director, TDR

Dr M. Gomes, Scientist, Epidemiology and Field Research Support (Secretary to the PTR)

UNDP/WORLD BANK/WHO SPECIAL PROGRAMME FOR
RESEARCH AND TRAINING IN TROPICAL DISEASES

FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

Geneva, 30 June and 1 July 1992

SUMMARIES OF THE TECHNICAL PRESENTATIONS TO JCB(15)
ON TDR-SUPPORTED PRODUCTS: THEIR IMPACT ON DISEASE CONTROL -
CASE STUDIES ON CHAGAS DISEASE AND LEPROSY

1. INTRODUCTION ON CHAGAS DISEASE, ITS IMPORTANCE, DISTRIBUTION AND CLINICAL
MANIFESTATIONS, AND ON RESEARCH ACTIVITIES RELEVANT TO CONTROL

Dr A. Moncayo, Chief, WHO Trypanosomiases and Leishmaniases Control Unit and Secretary of the TDR Steering on Chagas Disease, referred to the Board's comments on the translation of research into tools for disease control. This was a legitimate concern - research was not an end in itself but a means to get relevant tools for control and this policy was being followed by the TDR Steering Committee on Chagas Disease.

Chagas disease was an endemic disease of Central and South America. About 18 million people were infected and 90 million people, one out of four Latin Americans, were at risk of the disease. It was caused by a protozoan parasite which produced a chronic disease affecting the heart, the digestive system and the peripheral nervous system. Chagas disease was transmitted in two ways: firstly by the vector which bred and multiplied in the sub-standard dwellings of the rural areas of Central and South America; and secondly through blood transfusion, mainly in the big cities, which had turned what was previously a rural disease into a major urban problem. The TDR Steering Committee was working on tools to stop these two ways of transmission.

Early epidemiological research had concentrated on determining the prevalence of the disease and had been carried out in collaboration with the ministries of health of the various countries concerned. Subsequent research had concentrated on developing tools to prevent transmission. Two tools had been developed to interrupt vectorial transmission - fumigant canisters and insecticidal paints, and a kit for blood-bank screening had been developed to interrupt transmission through blood transfusion.

The canisters and the paints were currently being tested in the field in six countries using a standard protocol to compare results. The TDR-sponsored projects were being implemented through the respective national control programmes of the ministries of health. The Steering Committee had been very careful to involve the national programmes in the implementation of the field research to ensure acceptability, sustainability and to achieve maximum impact on control. Three different types of combinations of the canisters, insecticidal paints and traditional insecticides were being tested. Initial results of these studies in three countries after four months of application were very encouraging and showed that some combinations had greater impact on the vector than traditional insecticides. No data were yet available from the other three countries as field operations had only just started. Both the canisters and paints were produced in South America and had shown to be cost-effective.

With regard to interrupting transmission through blood transfusion, a considerable amount of basic research had been done on the parasite's genome to develop defined antigens for use in blood screening kits and more work was being carried out to produce better kits. The kits were in use and Dr E. L. Segura, Minister of Health and Social Action of the Province of Catamarca, Argentina, and Director of the Dr Mario Fatala Chabén National Institute for the Diagnosis and Study of Chagas Disease, Buenos Aires, would describe to the Board the use in the field of the kits and canisters.

2. CHAGAS DISEASE CONTROL ACTIVITIES IN ARGENTINA AND IN THE SOUTHERN CONE COUNTRIES

Dr E. L. Segura, Minister of Health and Social Action of the Province of Catamarca, Argentina, and Director of the Dr Mario Fatala Chaben National Institute for the Diagnosis and Study of Chagas Disease, Buenos Aires, referred to the contrasting scenery in the Southern Cone countries - the mountains and glaciers, the sub-tropical areas, the cities and the dry and devastated lands where people attempted desperately to scratch a living. It was here in these dry areas that insects called triatomids had changed from feeding on birds to feeding on the blood of mammals. These insects shared human dwellings, sucked their blood and transmitted Chagas disease or American trypanosomiasis, caused by a parasite *Trypanosoma cruzi*. The structure and material used in the building of the houses were conducive to the proliferation of insects. In addition, many poor people from the rural areas, where the prevalence of Chagas disease infection was high, had moved into urban areas. Vector transmission had not been demonstrated in the urban areas but people with Chagas disease had become blood donors and had opened up another route for transmission of the disease.

The prevalence of blood donors with Chagas disease varied and depended upon the epidemiological situation of the disease in each country. To ensure quality control of blood for transfusion, screening kits had been developed. One such kit had been developed at the Fatala Chaben Institute with support from TDR and the Swedish Agency for Research Cooperation with Developing Countries (SAREC). The Institute was currently discussing the transfer of the technology to the private sector.

With regard to vector control, earlier campaigns under national government auspices had focused on house spraying combined with health education. The control measures had been largely successful but substantial levels of infection had remained in the young age groups of the population. Therefore it had been considered necessary to return to every house for annual evaluation and this had become a major drawback.

It had been subsequently decided to design and use a triatomid bug detector in combination with two insecticide dispensers which could be implemented by the local communities. The project, named the "Maria" project, had been supported by TDR under an institution strengthening grant and spanned a period of five years. It had been carried out in an area of Santiago del Estero, Argentina, covering more than 600 dwellings with almost 3000 people. The dwellings had been searched for insects inside and outside the houses, using what was known as the "hour/man" technique which consisted of having two well-trained men make a thorough search for insects for 30 minutes.

The infested houses had been prepared for attack spraying which consisted of exhaustive spraying with synthetic pyrethroid insecticides. The bug detectors, called "Maria" sensors, were flat boxes simulating the preferred habitat of the bugs, in the form of a maze which made it difficult for the bugs to get out and so it was possible that, in addition to eggs and small insects, they also left traces of faecal material which would be recognized and marked by the health workers. One insecticide dispenser was a hand-spray which worked by releasing the pressurized suspension of insecticide, and could be bought at garden centres. The insecticides used were pyrethroid derivatives. The second dispenser was a fumigant canister which contained various mixtures that burned slowly, produced smoke, increased the insect's rate of respiration and brought it out of its hiding place to expose it to the other insecticides which were lethal. The room had to be sealed from ventilation to achieve maximum effectiveness. The canisters had been developed with TDR support.

Entomological surveillance of transmission had been introduced six months later with the houses divided into two groups. Surveillance in one group had been carried out by health workers who made regular house to house visits every three months within the framework of the rural health programme. During these visits the health workers were supposed to check the "Maria" sensors or collect the bugs handed to them by the people. The houses that had been reinfested were treated using manual sprays or fumigant canisters. This group had been called the primary health care area. In the second group of houses, surveillance had been carried out using the usual methods of the control

programme, consisting of annual visits with the "hour/man" evaluation and conventional spraying of homes that were infested. This group had been called the vertical surveillance area.

The results obtained had shown that the "Maria" sensors had greater sensitivity for the detection of triatomid bugs when there were only a few insects in the dwelling, that was for a period of one year following attack spraying. Subsequent performance had been similar to the "hour/man" evaluation. It had also been found that manual spraying was more effective than the fumigant canisters but that the people asked for the canisters to use themselves, which made them a useful tool for transferring activities to the community.

The effectiveness of the surveillance activities had been demonstrated by the number of dwellings reinfested over the five-year period of follow up. In the primary health care area of surveillance, with appropriate technology, there had been a reduction in the rate of reinfestation by a factor of almost 17, as compared to the number of dwellings infested in the base study; while in the vertical surveillance area, a reduction by a factor of nearly five had been found. These findings had coincided with the observations of the insect density found in the houses. The group of houses with a density of more than 30 insects had disappeared in both areas but in the area under surveillance by health workers with appropriate technology, the only houses which remained had very low densities of triatomids, with only 1-5 bugs. After five years of entomological surveillance, the prevalence of infection in children under five years had fallen to the same level as in areas where there had been no transmission by vectors.

With regard to costs, it had been found that interventions carried out by the health workers or rural agents, using fumigant canisters or manual sprays, were 3.5 times cheaper than the interventions carried out under conventional systems.

During the 15 years of TDR's involvement in Chagas disease, the Programme had played a fundamental role in the organization of research in Central and South America and had clearly demonstrated the possibility of obtaining results to enable the control of Chagas disease to be planned and programmed jointly by several countries.

Dr Segura also referred to collaboration with the Pan American Health Organization (PAHO). The work of PAHO and WHO gave the countries security and support and Dr Segura was grateful for this. At the end of the 1980s, there had been a great mobilization of government initiatives and by PAHO and WHO to eradicate the principal vector of Chagas disease, as it had been felt that the technical and human resources and knowledge were available to achieve this. In September 1990, the Pan American Sanitary Conference had adopted a resolution entitled "Towards the elimination of Chagas disease in the Region of the Americas" during the decade 1990-2000. The resolution had been ratified by the PAHO Executive Committee in June 1991 and in July of the same year the Ministers of Health of the Governments of Argentina, Bolivia, Brazil, Chile, Paraguay and Uruguay had launched the "Initiative of the Southern Cone Countries" expressing their political will to move ahead with their plans for the elimination of Chagas disease. PAHO had been designated the secretariat of the Initiative. It had been subsequently agreed that each country would submit its programmes to PAHO during the course of December 1991. The programmes had been collected and harmonized and the first meeting of government representatives would be held in July 1992 to agree upon the technical and financial aspects.

Dr Segura expressed the hope that PAHO and WHO would continue to support this Initiative and that TDR would continue to give financial support to the operational research needed to improve the efficiency of control programmes and to research to develop a vaccine.

3. INTRODUCTION ON LEPROSY, ITS IMPORTANCE, DISTRIBUTION AND CLINICAL MANIFESTATIONS, AND ON PROGRESS WITH THE IMPLEMENTATION OF MULTIDRUG THERAPY FOR LEPROSY

Dr S. K. Noordeen, Chief, WHO Leprosy Unit and Secretary of the TDR Steering Committee on the Chemotherapy of Leprosy, reported that there were currently an estimated

5.5 million leprosy patients in the world of whom about 3.1 million were registered in some kind of treatment facility. About 600 000 new cases were detected annually and about 1.4 billion people lived in areas where there was significant risk of leprosy.

The causative organism was called Mycobacterium leprae, which was related to M. tuberculosis, responsible for tuberculosis. Leprosy was a chronic disease, transmitted mainly by contact through the upper respiratory tract and also through skin contact. Only a small proportion of people infected actually developed leprosy and they developed a spectrum of disease depending upon the immunological status of the individual. The degree of infection varied from mild cases with spontaneous healing of skin lesions to the most extensive form, lepromatous leprosy, which affected many parts of the body causing severe damage and deformity. Fortunately the number of cases with extreme deformities, which showed that the patient had been neglected over a number of years without treatment, was decreasing. One-fifth of leprosy patients developed deformities. There were currently about 2-3 million individuals suffering deformities due to present or past leprosy. It was a stigmatizing disease and in many parts of the world there was social discrimination against people afflicted by leprosy.

With regard to distribution of the disease, it was a typical tropical disease which affected large parts of South-East Asia, most of Africa and large parts of Latin America. Prevalence varied widely from country to country and from region to region. Of the 3.1 million registered leprosy patients, approximately 2.2 million came from South-East Asia. The number of cases was fortunately dropping from a peak reached in 1985 of about 5.4 million registered patients. There had been a reduction of about 40% in the past seven years which was largely attributable to the introduction of multidrug therapy for leprosy.

Dr Noordeen described the three main objectives of leprosy control: to reduce the occurrence of new cases of the disease by interrupting transmission through the treatment of individuals; to cure leprosy patients individually and to limit disabilities; and wherever possible to rehabilitate the leprosy patients. Until 1980, leprosy control was based on treatment with a single drug - dapsone - but large-scale drug resistance had developed. The TDR Steering Committee on the Chemotherapy of Leprosy had played an important role in mapping the disease and demonstrating the occurrence of resistance of M. leprae to dapsone. The failure of disease control through dapsone monotherapy had been examined in 1981 by a WHO Study Group on Chemotherapy of Leprosy for Control Programmes. Experts from the TDR Steering Committee and leprosy programme managers had made substantial inputs into the discussions and the Group had made recommendations for the standard treatment of leprosy using a combination of drugs, including newer drugs by then known to be effective against M. leprae. This multidrug therapy (MDT) introduction was a major landmark in the history of leprosy control. A combination of three drugs was used against multibacillary leprosy - rifampicin, clofazimine and dapsone, with a significant part being administered at monthly intervals. The treatment recommended for paucibacillary leprosy involved two drugs - rifampicin once a month and dapsone daily, for a duration of six months.

There had been significant improvements in leprosy control throughout the world as a result of the use of multidrug therapy. The WHO recommendations had been accepted by most leprosy endemic countries and by donor agencies and a large group of nongovernmental organizations involved in leprosy which had led to a significant expansion of the administration of MDT for leprosy control over the past 7-8 years. MDT had been shown to be very effective, safe, acceptable to both patients and health workers, and cost-effective. Recent studies supported by the World Bank had shown that the cost per year of healthy life gained using MDT was about US\$ 12.7. This was significant in comparison with other interventions for other health problems. The average cost of treating a leprosy patient with MDT was about US\$ 31, taking into consideration the mix of patients with multibacillary and paucibacillary leprosy.

Dr Noordeen referred to progress using MDT. Of the 3.1 million registered leprosy patients, only about 1.3 million were currently taking MDT, about 42%. This was

unsatisfactory and the reasons were being studied. The percentage used to be higher in previous years. However, the cumulative number of cases which had completed MDT over the past 7-8 years was about 2.9 million and the cumulative coverage for MDT was close to 70% in 1992. Progress had been significant in the past 7-8 years. It would appear now to be a more difficult phase as the easy to reach areas had been covered and the more difficult areas remained.

Implementation of MDT varied widely from region to region and from country to country. There were about 90 countries endemic for leprosy and only approximately 50 of them had satisfactory cumulative MDT coverage. Another interesting factor was that about 25 countries had about 95% of the number of leprosy cases in the world and in fact the top five countries had about 85% of all cases in the world. In the top 25 countries coverage with MDT was uneven and in at least seven of these 25, MDT coverage was unsatisfactory and required further attention.

Dr Noordeen referred to resolution WHA44.9 adopted by the Forty-fourth World Health Assembly in May 1991 concerning the global elimination of leprosy as a public health problem by the year 2000. In adopting the resolution, the Assembly had taken into account the impact of MDT, increasing political commitment to control the disease, increasing support from various agencies and increasing community awareness. Several steps were being taken by WHO in response to this resolution. A strong leprosy working group had been set up to organize developments towards the elimination of the disease and a number of nongovernmental organizations were active members of the group. Regional and national strategies were being developed, national plans of action were helping to mobilize resources and strengthen management capabilities, health systems research and information systems were being strengthened and the coordinating role of WHO had been reinforced.

For the later phases of elimination, better drug combinations would be required for the treatment of leprosy and hopefully there would be a vaccine. The prospects for developing better drugs and drug combinations were good and leprosy treatment in the next five years should be more effective than it was today. Hopefully leprosy control activities would be intensified and the goal for the elimination of leprosy attained.

4. EXPERIENCE IN THE USE OF MULTIDRUG THERAPY FOR LEPROSY (MDT) IN MYANMAR, ESPECIALLY WITH REGARD TO THE DELIVERY OF MDT THROUGH A PRIMARY HEALTH CARE SYSTEM

Dr U Tin Myint, Former Deputy Director, Leprosy Control Programme, Department of Health, Yangon, Myanmar, considered that the use of MDT to control leprosy in Myanmar, with WHO's collaboration, was a success story. Work since 1988 had concentrated on a central division of Myanmar, covering 60% of the population with 88% of the leprosy patients.

Dr Tin Myint referred to the leprosy situation before the introduction of MDT. The estimated number of leprosy cases was 700 000, with almost 205 000 registered. There had been a leprosy control programme in Myanmar since 1950 based on the use of dapsone monotherapy but there had been problems with dapsone resistance, increasing prevalence of the disease and disability in almost 26% of leprosy cases.

MDT had been introduced in Myanmar in 1988, initially using the leprosy control personnel numbering about 400 people. A programme had been set up to introduce MDT over a four-year period, covering 25% annually of the selected central area where 88% of the leprosy patients lived. After two years, with 50% of the area covered, the programme had been unable to proceed in view of the lack of human resources. It had therefore been decided to explore the possibility of delivering MDT through the primary health care system as there were more than 8000 primary health care workers. However they were not trained in the field of leprosy, they had many other responsibilities for other diseases and their attention was directed more towards curing acute diseases. The possibility of using the midwives, the female primary health care workers, had therefore been considered. Their responsibilities, workload, size of area under their responsibility and the approximate number of leprosy patients within the area had been studied, and it had been

decided that the midwives were the most appropriate people to delivery MDT. The midwives had the confidence of the people and the communities but they lacked knowledge of leprosy and their workload was increased by adding these divergent responsibilities. Efforts had therefore been made to motivate and train the midwives and these efforts had been successful. Responsibilities had been divided, with certain people dealing with implementation and others with monitoring, so that there was no overlapping of responsibilities.

The results had been very positive and the number of registered leprosy patients had dropped from 160 000 in 1988 to 80 000 in 1991. The number of patients on MDT at the end of 1991 was 49 000 and the number of cumulative cases which had completed MDT by the end of 1991 was over 72 000. The greatest benefit had been derived from using the female primary health care workers who had the confidence of the people and were able to detect new cases more easily. In 1986 only about 6000 new cases had been found, after the introduction of MDT this figure had risen to 6500 cases in 1989, but after the primary health care workers had taken on the task of delivery the figure had increased to over 9000 new cases detected in 1991.

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FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

Geneva, 30 June and 1 July 1992

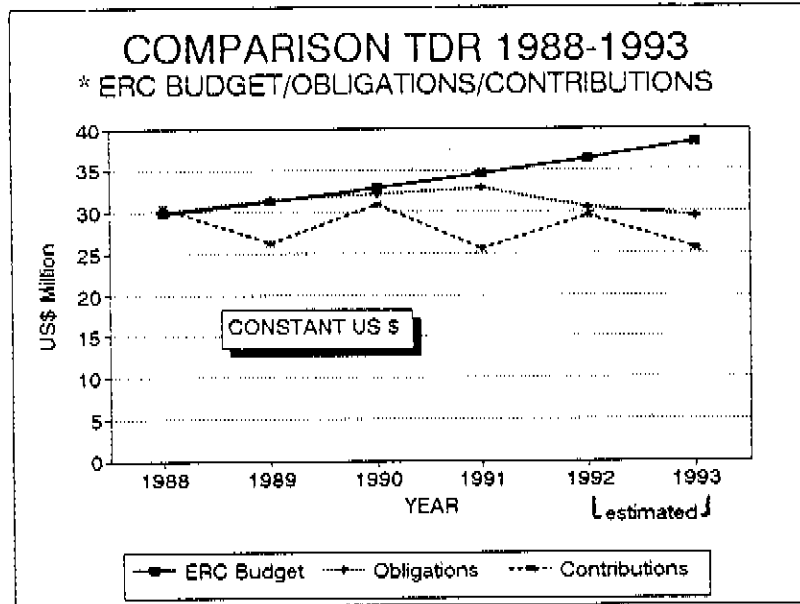
TDR'S FINANCIAL STATUS IN 1990-1991 AND ESTIMATED FINANCIAL STATUS
IN THE 1992-1993 BIENNIUM (US\$ 000)

<u>SOURCE OF FUNDS</u>	<u>1990-1991 ACTUAL</u>	<u>1992-1993 ESTIMATE</u>
Opening balance - 1 Jan.	8 195.6	2 760.1
Income:		
Contributions	62 310.3	65 735.0
Interest and other income	<u>4 084.8</u>	<u>2 165.0 (a)</u>
Total funds available	<u>74 590.7</u>	<u>70 660.1</u>
Funding gap	<u> </u>	<u>7 184.9</u>
Total funds required	<u>74 590.7</u>	<u>77 845.0</u>

<u>APPLICATION OF FUNDS</u>		
Obligations/Budget	71 830.6	76 845.0
Closing balance - 31 Dec.	<u>2 760.1</u>	<u>1 000.0</u>
Total applications	<u>74 590.7</u>	<u>77 845.0</u>

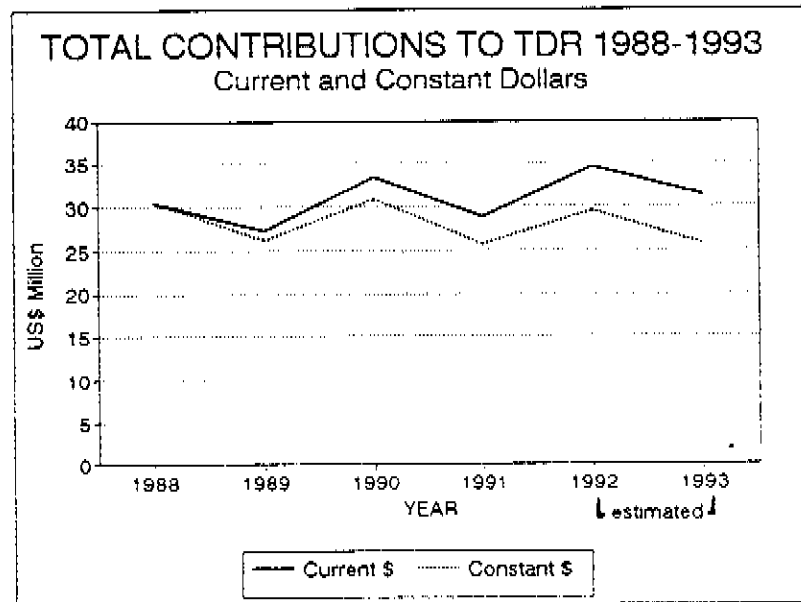
(a) The interest is estimated to be half of the 1990-1991 amount due to the very low cash balance throughout the 1992-1993 biennium. The net savings on prior years' unliquidated obligations are also estimated to be half of the 1990-1991 amount, due to closer monitoring of obligations.

FIGURE 1



*ERC - External Review Committee

FIGURE 2



The deflator rates used to derive the constant dollars are 3.9% (1989), 3.8% (1990) and 4.0% (1991-93). Source: IMF International Financial Statistics Yearbook 1991.

UNDP/WORLD BANK/WHO SPECIAL PROGRAMME FOR
RESEARCH AND TRAINING IN TROPICAL DISEASES

FIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

Geneva, 30 June and 1 July 1992

MEMBERSHIP OF THE JOINT COORDINATING BOARD
(as of 1 January 1993)

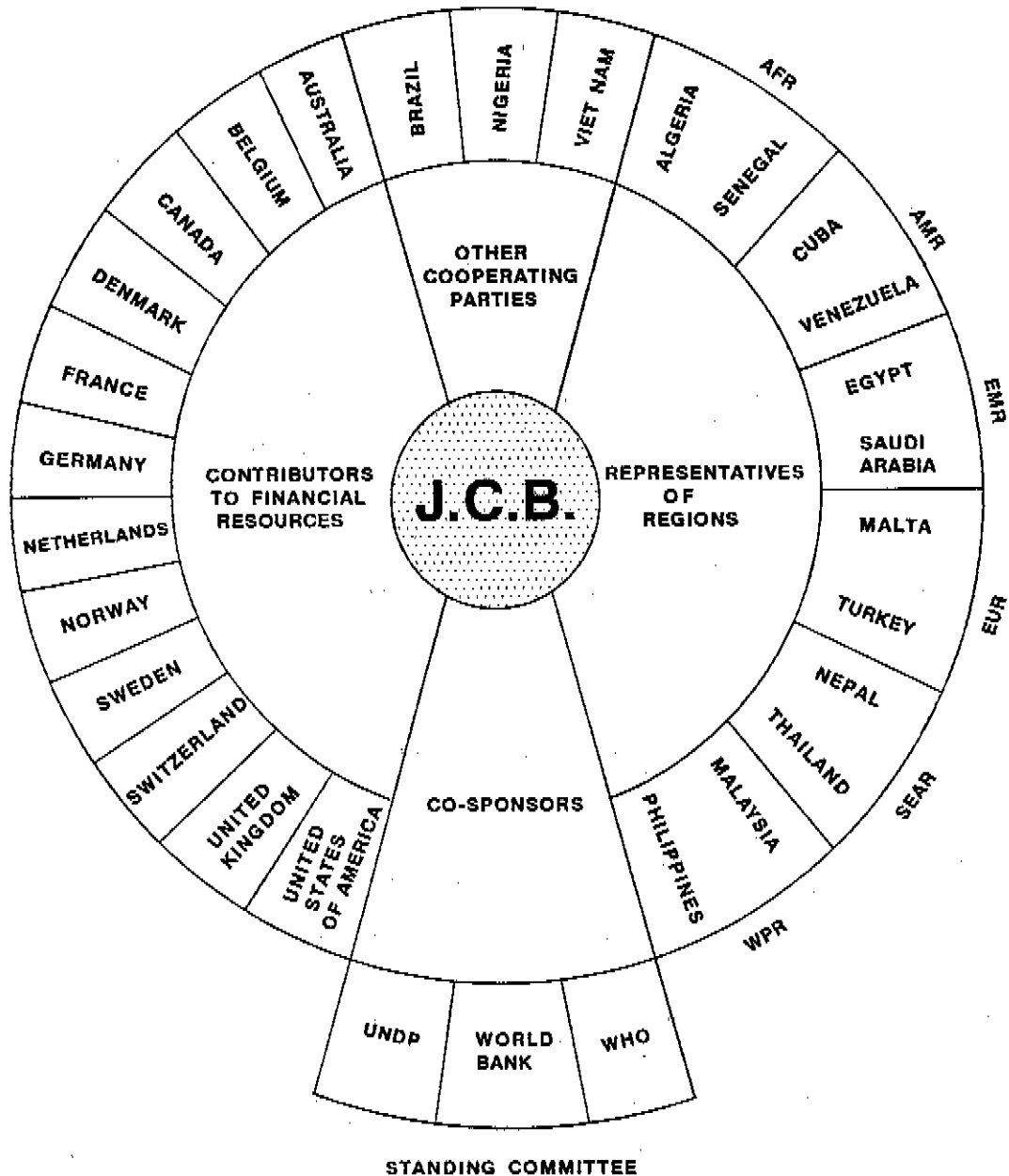
List of Tenures

Algeria	to 31 December 1995
Australia	to 31 December 1993
Belgium	to 31 December 1994
Brazil	to 31 December 1994
Canada	to 31 December 1995
Cuba	to 31 December 1995
Denmark	to 31 December 1995
Egypt	to 31 December 1994
France	to 31 December 1994
Germany	to 31 December 1995
Malaysia	to 31 December 1995
Malta	to 31 December 1995
Nepal	to 31 December 1995
Netherlands	to 31 December 1993
Nigeria	to 31 December 1993
Norway	to 31 December 1994
Philippines	to 31 December 1994
Saudi Arabia	to 31 December 1995
Senegal	to 31 December 1994
Sweden	to 31 December 1995
Switzerland	to 31 December 1993
Thailand	to 31 December 1994
Turkey	to 31 December 1994
United Kingdom	to 31 December 1994
United States of America	to 31 December 1993
Venezuela	to 31 December 1994
Viet Nam	to 31 December 1995

United Nations Development Programme
World Bank
World Health Organization

UNDP/WORLD BANK/WHO
SPECIAL PROGRAMME FOR RESEARCH AND TRAINING IN TROPICAL DISEASES

Membership of the Joint Coordinating Board (JCB)
(as of 1 January 1993)



UNDP/WORLD BANK/WHO SPECIAL PROGRAMME FOR
RESEARCH AND TRAINING IN TROPICAL DISEASESFIFTEENTH SESSION OF THE JOINT COORDINATING BOARD

Geneva, 30 June and 1 July 1992

MEMBERSHIP OF THE SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE (STAC)
(as of 1 January 1993)

<u>Name and Title</u>	<u>Term of Appointment</u>
AGABIAN, Prof Nina M., Director, Intercampus Program, Molecular Parasitology, School of Pharmacy, and Professor of Pharmaceutical Chemistry, University of California, San Francisco, and Professor of Biomedical and Environmental Health Sciences, School of Public Health, University of California, Berkeley, California, <u>UNITED STATES OF AMERICA</u>	to 31 December 1995
BLOOM, Prof B. R., Professor and Chairman, Department of Microbiology and Immunology, Albert Einstein College of Medicine of Yeshiva University, New York, N.Y., <u>UNITED STATES OF AMERICA</u>	to 31 December 1993
CASTILLO, Prof Gelia T., Professor of Rural Sociology, Department of Agricultural Education and Rural Studies, College of Agriculture, University of the Philippines at Los Baños, Laguna, <u>PHILIPPINES</u>	to 31 December 1994
*GABR, Prof M., Head, Paediatric Department, Faculty of Medicine, Cairo University, Cairo, <u>EGYPT</u>	to 31 December 1993
GARATTINI, Prof S., Director, "Mario Negri" Institute for Pharmacological Research, Milan, <u>ITALY</u>	to 31 December 1993
JAMISON, Prof D. T., Professor, Graduate School of Education and Professor, School of Public Health, University of California, Los Angeles, California, <u>UNITED STATES OF AMERICA</u>	to 31 December 1994
MÄKELÄ, Prof P. Helena, National Public Health Institute, Helsinki, <u>FINLAND</u>	to 31 December 1993
MOLYNEUX, Prof D. H., Director, Liverpool School of Tropical Medicine, Liverpool, <u>UNITED KINGDOM</u>	to 31 December 1993
MOREL, Dr C. M., Head, Department of Biochemistry and Molecular Biology, and Associate/Senior Researcher, Oswaldo Cruz Institute, Oswaldo Cruz Foundation, Rio de Janeiro, <u>BRAZIL</u>	to 31 December 1995
PLIKE, Prof M. C., Professor and Chair, Department of Preventive Medicine, School of Medicine, University of Southern California, Los Angeles, California, <u>UNITED STATES OF AMERICA</u>	to 31 December 1993

*Co-opted in his capacity of Chairman of the WHO Global Advisory Committee on Health Research

STAC MEMBERSHIP (1993) (continued)

<u>Name and Title</u>	<u>Term of Appointment</u>
RAJEWSKY, Prof K., Professor of Molecular Genetics, Science Faculty, University of Cologne, Cologne, <u>GERMANY</u>	to 31 December 1993
RAMA RAO, Dr A. V., Director, Indian Institute of Chemical Technology, Hyderabad, <u>INDIA</u>	to 31 December 1995
RILEY, Prof I. D., Professor of Tropical Health and Director, Tropical Health Education Program, and Director of Public Health Courses, University of Queensland, Brisbane, <u>AUSTRALIA</u>	to 31 December 1995
SALAKO, Prof L. A., Head, Department of Pharmacology and Therapeutics, University of Ibadan, Ibadan, <u>NIGERIA</u>	to 31 December 1993
SALOMAO, Dr M. Angélica, National Director of Health, Ministry of Health, Maputo, <u>MOZAMBIQUE</u>	to 31 December 1994
SANSONETTI, Dr P. J., Head, Molecular Bacterial Pathogenicity Unit, and Chairman, Department of Bacteriology and Mycology, Pasteur Institute, and Chairman, Commission of Infectious and Parasitic Diseases, National Institute of Health and Medical Research, Paris, <u>FRANCE</u>	to 31 December 1995
SERGIEV, Dr V. P., Director, Martsinovskiy Institute of Medical Parasitology and Tropical Medicine, Moscow, <u>RUSSIAN FEDERATION</u>	to 31 December 1993
SHIMAO, Dr T., Chairman, Board of Directors, Japan Anti-Tuberculosis Association, Tokyo, <u>JAPAN</u>	to 31 December 1993

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